



#2K
KP
1-17-02
Attachment
AE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

Andrew Fire et al.

Group Art Unit: 1635

Application Serial No. 09/215,257

Examiner: K. Lacourciere

Filed: December 18, 1998

Title: GENETIC INHIBITION BY DOUBLE-STRANDED RNA

* * * * *

AMENDMENT & RESPONSE TO OFFICIAL ACTION

Hon. Commissioner of Patents
Washington, D.C. 20231

TECH CENTER 1600/2900

JAN 15 2002

RECEIVED

Sir:

This Reply is responsive to the Office Action dated October 19, 2001. Entry of the following amendments and remarks is respectfully requested.

IN THE CLAIMS:

Kindly cancel claims 12-14, 17-20, 23-25 and 40-46 without prejudice.

Kindly consider the following amended claims:

Sub D₂
1. (Thrice Amended) A method to inhibit expression of a target gene in a cell in vitro comprising introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, wherein the RNA consists essentially of a double-stranded structure having a first ribonucleotide sequence which corresponds to a nucleotide sequence of the target gene and a second ribonucleotide sequence which is complementary to the nucleotide sequence of the target gene, wherein the first and the second ribonucleotide sequences are separate complementary sequences that hybridize to each other to form said double-stranded structure, and the double-stranded structure inhibits expression of the target gene.

Sub E₁ C₂
10. (Twice Amended) The method of claim 1 in which the first and the second ribonucleotide sequences comprise at least 25 bases which correspond to or are complementary to the nucleotide sequence of the target gene.

Sub D₂
15. (Amended) The method of claim 1 further comprising synthesis of the two complementary strands and initiation of RNA duplex formation outside the cell.